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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

METZMAIER, DANIEL S

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1712

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/088,980	Applicant(s) HATCHMAN ET AL.	
	Examiner Daniel S. Metzmaier	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claims 1-6 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 23 May 2006 and 17 August 2006 have been entered. The 17 August 2006 amendment appears to be a duplicate of the submission filed on 23 May 2006. The 17 August 2006 remarks have been addressed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-3 are indefinite since the surfactant and the electrolyte components overlap for anionic, amphoteric and cationic surfactants. It is unclear what extent one skilled in the art should attribute materials to the concentration range set forth in the claims as surfactant and electrolyte for anionic, amphoteric and cationic surfactants, since said surfactants dissociate in aqueous solution forming electrolytes.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1-3 is rejected under 35 U.S.C. 102(b) as being anticipated by Lion Corp, DE 36 17 306 A (hereafter Lion), as evidenced by Derwent Abstract AN 1986-320274. Lion (claims 1, 3, and 4; page 5, lines 34, to page 6, line 17; page 7, line 26, to page 8, line 7; page 9, lines 4-6; page 10, line 33, to page 11, line 15; page 12, lines 7, to page 14, line 15; example 1; table III; page 18, lines 1-19; examples 19, 20; table IV; and Derwent Abstract) discloses pearlescent concentrates employing ethylene glycol distearate, anionic sulfates, and coemulsifiers and characterizes said compositions as having an isotropically clear phase enabling the pearly luster appearance (see Derwent Abstract). The disclosed compositions would have inherently provided the protolamellar structure based on the components and the characterization of the compositions as lamellar and providing an excellent pearly luster in the concentrate.

Further attention is directed to Table III, example 1, which sets forth 30 parts ethylene glycol distearate, 45 parts LES-Na and 4 parts potassium chloride. Said example reads on the claims. It is noted that claims 1-3 provide for only the concentration of the electrolyte.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horiuchi et al, US 4,486,334, in view of Hawkins, US 5,952,285, and Albright & Wilson LTD, AU-A-16451/95.

Horiuchi et al (abstract, examples, and claims) disclose aqueous pearlescent concentrate compositions comprising 3 to 45 wt% of a pearlizing agent including ethylene glycol distearate, and 30 to 50 wt% of sodium polyoxyethylene lauryl ether sulfate as a middle phase (M₁ phase) liquid crystals. Horiuchi et al (column 3, lines 46 et seq; examples; and claims) discloses the formation of the middle phase liquid crystals by dispersing the pearlescent agent above the melting point (i.e., 50 to 80° C)

followed by cooling to form the pearlizing agent. Horiuchi et al (column 4, lines 6 et seq) further teaches the specific surfactant concentration can be determined by the limitation of the pearlizing agents, which can be solubilized in the micelles at a concentration of 3 to 45 wt% of pearlizing agent.

Horiuchi et al differs from the claims in the further addition of a simple salt electrolyte (e.g., NaCl), an explicit disclosure of the pearlizer particle size and the particular concentration ranges claimed.

Hawkins (abstract; column 7, lines 54 et seq) discloses the addition of electrolyte to middle phase liquid crystalline ((hexagonal or cubic symmetry) resulting in an pourable optically isotropically liquid composition. Hawkins (column 20, lines 6-10; and column 24, Table II) teaches chloride salts and exemplifies 1 wt% of sodium chloride.

Hawkins (column 17, lines 29 et seq) further teaches increasing the cloud point of surfactants by the addition of small amounts of sodium chloride.

Albright & Wilson further teach the formation of pearlescent concentrate compositions. Albright & Wilson (page 2 and examples) discloses ethylene glycol mono- and distearate mixtures as pearlizing agents. Albright & Wilson (claims 14 and 15 and figures) discloses the particles size for said pearlizing agents in the suspensions are that at least 90% of the particles are 5 to 20 microns.

These references are combinable because they teach surfactant compositions having liquid crystalline structures and modifications thereof by varying concentrations and materials. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to add sufficient sodium chloride to the compositions of

Horiuchi et al for the advantage of forming an optically isotropically liquid composition and the added advantage of handling ease esthetic appearance of the concentrates.

The particles sizes would have been obvious to one of ordinary skilled in the art at the time of applicants' invention as conventional sizes shown in the Albright & Wilson reference. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to vary the concentrations as a point of law. See also MPEP 2144.05(I) wherein it sets forth, "A *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. ***Titanium Metals Corp. of America v. Banner***, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985)."

9. The remaining references cited in the search report as X references for claims 1-3 are considered cumulative to the references relied on in the above rejections over claim 3 or 3-6, respectively.

Response to Arguments

10. Applicant's arguments filed August 17, 2006 have been fully considered but they are not persuasive.

Applicants (page 4) assert Lion as evidenced by Derwent '274 lacks a recitation of a protolamellar phase. This has not been deemed persuasive since the Lion compositions comprise isotropic compositions that otherwise read on the claims. Since a compound or composition and all of its properties are generally inseparable, (*In re Papsech*, 315 F2d. 381, 137 USPQ 43, (CCPA 1963)) said property would have been expected in the claimed compositions. Applicants characterize the isotropic character

as an indication of protolamellar properties. Attention is directed to page 2, 2nd full paragraph of the instant specification.

Applicants (page 6) assert the inventive compositions are clear and optically isotropic. The Derwent '274 states the Lion material has good pearly lustre without the need for a separate crystallization step.

11. Applicants further (page 4) assert the Lion reference fails to disclose the wetting agent as a surfactant. Attention is specifically directed to the definition of "wetting agent", "surface-active agent", and "surfactant" as set forth in Hawley's Condensed Chemical Dictionary, pages 1111-1112 and 1235. Please note that "wetting agent" is defined as a "surface-active agent", i.e., "surfactant".

Furthermore, example 1 (Table III, page 16) of the Lion reference sets forth LES-Na as the surface-active wetting agent and (page 15) denotes said compound as sodium polyoxyethylene lauryl ether sulfate with 3 moles of ethylene oxide added. Attention is further directed to Myers, Surfactant Science and Technology, 2nd Ed, pages 46-47, wherein the alcohol ether sulfates (AES) are specifically characterized as surfactants.

Applicants further (pages 4 and 5) assert the Lion reference contemplates the use of alcohol as the wetting agent, which applicants assert would not work to form the liquid crystalline phase. It is unclear what basis applicants rely for their assertion that alcohol is employed as a wetting agent. While the Lion reference (page 8, lines 9-12) does disclose the use of nonionic surfactants as wetting agents, it is unclear where the

Lion reference specifically discloses alcohols per se. The Lion reference does disclose pearling agents, which are ester-alcohols.

Furthermore, any alleged disclosure of alcohols is not deemed persuasive in view of the facts that: (1) since the agent is disclosed as a wetting agent, (2) wetting agents are defined as surfactants, and (3) the claims are directed to the use of surfactants; it is logical to conclude any alleged or disclosed alcohols must be surfactants.

One having ordinary skill in the art does not view the prior art in a vacuum or without the knowledge that forms the state of the art. Furthermore, attention is directed to Horiuchi et al (column 3, line 15 et seq; example 2; column 5, lines 58-59), which employs AES as a surfactant and more specifically mentions the same compound as LES-Na employed in Lion.

12. Applicants (page 5 and 6) assert there exist no motivation to employ the teachings of Hawkins in the methods of the Horiuchi et al reference. Applicants further assert Hawkins adds the electrolyte to breakdown structure. Applicants conclude one of ordinary skill in the art would not combine Hawkins with the Horiuchi et al reference to build structure. This has not been deemed persuasive for the following reasons:

(1) Initially, it is unclear how applicants reach a conclusion that the abstract of Hawkins teaches the break down of structure. Hawkins abstract sets forth:

A liquid detergent composition containing water; surfactant in a concentration which would in the absence of electrolyte forms a pourable hexagonal, or cubic phase at 20.degree. C.; and sufficient dissolved electrolyte to form a substantially Newtonian or optically isotropic liquid.

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Hawkins employs the well-known effect of electrolyte addition to increase solubility of the internal phase of micelles and reduce the critical micelle concentration (CMC) of the surfactants. Attention is further directed to Myers, Surfactant Science and Technology, 2nd Ed, pages 119-120, wherein the presence of electrolytes in aqueous surfactant solutions reduces the CMC and said effect is greater for ionic surfactants. See also, Rosen, Surfactants and Interfacial Phenomena, pages 131-132. Attention is directed to the instant specification at page 4, 3rd full paragraph, wherein the preferred, surfactants are anionic, i.e., ionic surfactants.

(2) While the addition of electrolyte may be characterization as breaking one structure (e.g., hexagonal or cubic phase), it can likewise be characterized as the formation of optically isotropic liquids (e.g., protolamellar). See the instant specification at page 2, 2nd full paragraph, where the protolamellar solutions are characterized as optically isotropic liquids.

(3) Hawkins (abstract) discloses the formation of optically isotropic liquids. Applicants characterize (page 2, 2nd ¶) the protolamellar solutions are optically isotropic liquids.

(4) Lastly, attention is directed to paragraphs denoted "11.", including items (1) through (5), pages 7-9, Office Action mailed March 23, 2006, which discuss the term "protolamellar" and are incorporated herein by reference.

13. Applicants (page 6) assert the higher concentrations of surfactant with electrolyte would result in high viscosity LC phases unaffected by electrolyte. Applicants conclude any other conclusion based on Hawkins and Horiuchi et al is based on hindsight. This

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has not been deemed persuasive since at least claim 4 includes 30 % by weight of surfactants.

Furthermore, the addition of electrolyte is known to decrease the CMC of ionic surfactants. It would have been obvious to one having ordinary skill in the art at the time of the invention to employ lower concentrations of surfactants with a reasonable expectation of success since: (1) the addition of electrolyte is known to decrease the CMC of ionic surfactants, (2) applicants prefer ionic and more specifically anionic surfactants, (3) Hawkins clearly teaches (column 17 and 18, examples and claim 2) lower surfactant concentrations in the presence of electrolyte, and (4) the claims do not define a viscosity element and thus, the arguments are not commensurate in scope with the claims.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

14. Applicants (page 6) assert Albright & Wilson is improperly combined with Horiuchi et al and Hawkins since (page 2, lines 3-7) disclose the desire to exclude salt. This has not been deemed persuasive for the following reasons. See MPEP 2141.01.

A reference may be combinable if it is "analogous prior art". Analogous prior art is "in the field of applicant's endeavor" or "reasonably pertinent to the particular problem with which the inventor was concerned". Applicants field of endeavor is the formation of "stable systems for suspending pearlizing concentrates for incorporation into liquid formulations such as shampoos and toiletries to impart a nacreous iridescence". See instant specification, page 1, first paragraph. Albright & Wilson are directed to pearlescent concentrates for use in cosmetic, hair, washing, shower preparations. See page 1, first paragraph of Albright & Wilson.

Furthermore, Albright & Wilson is cited only to show the conventional pearlizing agent particle sizes. Applicants do not dispute that the particle size of the pearlizing agents shown in Albright & Wilson to be conventional nor that the addition combination of Horiuchi et al and Hawkins somehow would destroy said particle size.

Applicants (pages 6 and 7) further assert the Albright & Wilson reference teaches high concentrations of surfactants. Applicants have not shown said concentrations to have an effect on the particle size of the pearlizing agent, which is employed in the same or substantially the same concentrations.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, Said argument has been addressed above. See *In re McLaughlin, supra*.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM